

## REMARKS

This paper is filed in response to the official action dated May 6, 2005 (hereafter, the "official action"). This paper is timely-filed as the period for response expired on Saturday, August 6, 2005, and thus carries over to August 8, 2005.

Also, as a preliminary matter, the applicant note that this application names a sole inventor in contrast to the examiner's assertions on page 2 of the official action.

Claim 1 is pending. By the foregoing amendments, claim 1 has been amended for clarity and to correct typographical errors. No new matter has been added.

Claim 1 remains at issue.

Claim 1 has been rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,251,784 to Li *et al.* ("Li"). Claim 1 has also been rejected under 35 U.S.C. §103(a) as obvious over Li.

The various bases for the claim rejections are addressed below in the order presented in the official action. Reconsideration of the application, as amended and in view of the following remarks, is solicited.

### CLAIM REJECTION – 35 U.S.C. §102(b)

Claim 1 is rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 6,251,784 to Li *et al.* The applicant respectfully traverses the rejection.

It is well-established that each and every limitation of a claimed invention must be present in a single prior art reference in order for anticipation to occur. *See*, for example, *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1349 (Fed. Cir. 1998). The standard for anticipation is one of strict identity. This standard has not been satisfied with respect to claim 1.

Claim 1 recites a method of detecting a polishing end point comprising using a sensor to detect a variation in the concentration of a material within an initial polishing layer or to detect a variation in the concentration of a material within a polishing stop layer by measuring the concentration of the material within the initial polishing layer or the concentration of the material within the polishing stop layer contained in polishing wastewater drained during a polishing process. Thus, the polishing process is controlled by using a detected concentration variation in the

polishing wastewater of either *the material within the initial polishing layer or the material within the polishing stop layer*.

In contrast to controlling the polishing process by detecting a species initially contained within either the initial polishing layer or the polishing stop layer, Li *requires the generation of a chemical reaction product, which can then be detected*. See Li at column 4, lines 14-18. More specifically, Li discloses converting the chemical reaction product (ammonia) to a separate product (ammonia chloride), exposing the separate product to ionizing radiation, and monitoring an ionization current generated by the radiation, which corresponds to a change in concentration of the separate product and can therefore provide a signal to stop the polishing process. Thus, the polishing process of Li is controlled by a change in the ionization current in contrast to the process of claim 1 wherein the polishing process is controlled by a detected concentration variation in the polishing wastewater of either *the material within the initial polishing layer or the material within the polishing stop layer*.

For the foregoing reasons, the applicant respectfully submits that the anticipation rejection of claim 1 over Li should be withdrawn.

#### **CLAIM REJECTION – 35 U.S.C. §103(a)**

Claim 1 has been rejected under 35 U.S.C. §103(a) as obvious over Li. The applicant respectfully traverses the rejections.

A *prima facie* case of obviousness must satisfy three legal requirements. *First*, there must be some suggestion or motivation, either in the references themselves, or in knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. *Second*, there must be a reasonable expectation of success. *Third*, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. See M.P.E.P. §2143. These criteria have not been satisfied with respect to claim 1.

Li *merely* discloses and suggests monitoring the level of a chemical reaction product formed from a chemical reaction between an applied slurry and one of the films being polished (or removed). Thus, Li invariably requires the formation of a chemical reaction product and does not contemplate controlling the polishing process by *detecting a variance in concentration of a species initially contained within either the initial polishing layer or the polishing stop layer*, as recited by claim 1.

For the foregoing reasons, the applicants submit that the rejection of claim 1 as obvious over Li should be withdrawn.

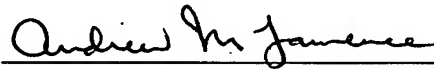
### CONCLUSION

It is submitted that the application is in condition for allowance. Should the examiner wish to discuss any matter of form or procedure in an effort to advance this application to allowance, she is respectfully invited to telephone the undersigned attorney at the indicated telephone number.

August 8, 2005

Respectfully submitted,

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